

REMARKS

Claims 1-3 and 5-11 are pending in this application. By this Amendment, claims 5-9 are amended and claim 4 is canceled. Reconsideration of the present application based on the above amendments and the following remarks is respectfully requested.

Applicants gratefully acknowledge the Office Action's indication that claims 1-3, 10 and 11 are allowed.

Applicants gratefully acknowledge the courtesies extended Applicants' representative by Examiner Tran during the January 11 telephone interview. Applicants' separate record of the substance of the telephone interview is incorporated into the following remarks.

Entry of the amendment is proper under 37 CFR §1.116 since the amendment: (a) places the application in condition for allowance for the reasons discussed herein; (b) does not raise any new issues requiring further search and/or consideration since the amendment amplifies issues previously discussed throughout prosecution; (c) does not present any additional claims; and (d) place(s) the application in better form for appeal, should an appeal be necessary.

The Office Action rejects claims 4-9 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,684,627 to Mizuno. This rejection is respectfully traversed.

During the telephone interview, the distinguishing features of claims 5-9 with respect to Mizuno were discussed. Specifically, Applicants' representative asserted that Mizuno fails to disclose a method of purifying exhaust gas of an internal combustion engine, wherein the sulfur-solidifying agent is supplied to the engine in a decreased amount or is not supplied when the internal combustion engine is operated under a condition of suppressing the occlusion of SO_x by the NO_x occluding and reducing catalyst, as claimed in claim 5; a method of purifying exhaust gas of an internal combustion engine, wherein the sulfur-solidifying agent is supplied to the engine in a decreased amount or is not supplied when the

internal combustion engine is operated under a condition of promoting the SOx occluded by the NOx occluding and reducing catalyst to be released from the NOx occluding and reducing catalyst, as claimed in claim 6; a method of purifying exhaust gas of an internal combustion engine, wherein the sulfur-solidifying agent is supplied to the engine in a decreased amount or is not supplied when the internal combustion engine is operated under a condition of promoting the formation of deposit in the engine due to the sulfur-solidifying agent, as claimed in claim 7; a method of purifying exhaust gas of an internal combustion engine, wherein the sulfur-solidifying agent is supplied to the engine in a decreased amount or is not supplied when the internal combustion engine is operated under a condition of promoting the occurrence of knocking due to the addition of the sulfur-solidifying agent, as claimed in claim 8; or a method of purifying exhaust gas of an internal combustion engine, wherein the sulfur-solidifying agent is supplied to the engine, in a decreased amount or is not supplied when the knocking has occurred in the internal combustion engine, as claimed in claim 9.

With respect to the features of claims 5 and 6, Applicants' representative reviewed with the Examiner the Office Action's assertion that the following passage of Mizuno discloses these features.

For example, there are situations in which the aforementioned rich spike operation is not applicable, depending upon operational states, and thus the NOx occlusion capability of the exhaust purifying catalyst 39 is preferably maintained as large as possible. When the large occlusion capability is ensured, it is feasible to avoid NOx flowing to downstream without being occluded. The sulfur solidifier is used for solidifying the sulfur component (col. 8, lines 50-57).

Applicants' representative explained to the Examiner that this passage merely discloses that the NOx occlusion capability of the exhaust purifying catalyst is maintained as large as possible and that the sulfur solidifier is used for solidifying the sulfur component. Thus, Mizuno does not disclose that the sulfur-solidifying agent is supplied to the engine in a

decreased amount when the internal combustion engine is operated under a condition of either suppressing the occlusion of SOx by the NOx occluding and reducing catalyst or promoting the SOx occluded by the NOx occluding and reducing catalyst to be released from the NOx occluding and reducing catalyst. As such, Mizuno fails to disclose all of the features of either claim 5 or 6.

With respect to claims 7-9, Mizuno discloses that the engine 1 is equipped with a knock sensor 25 for detecting knocking of the engine 1 (col. 6, lines 35-36); that although the necessary solidification rate of the sulfur component is 70% or more, it is preferably not more than 95%; that solid matter is produced by the solidification of the sulfur component; that there are apprehensions that the solid matter can be the cause of knocking and that it adheres as deposits near the combustion chambers; that it can be the cause of plugging of the starting catalysts 27 and the exhaust purifying catalyst 39; and that it can be predicted that as the solidification rate becomes closer to 100%, the range of improvement in the SOx poisoning of the exhaust purifying catalyst 39 gradually decreases (col. 10, line 65 – col. 11, line 10).

During the telephone interview, Applicants' representative explained to the Examiner that Mizuno does not disclose that the sulfur-solidifying agent is supplied to the engine in a decreased amount or is not supplied when the internal combustion engine is operated under any of the conditions of promoting the formation of deposit in the engine due to the sulfur-solidifying agent, promoting the occurrence of knocking due to the addition of the sulfur-solidifying agent, or when knocking has occurred in the internal combustion engine. As such, Mizuno fails to disclose all of the features of any of claims 7, 8 or 9.

As such, Mizuno fails to disclose all of the features of any of claims 5-9. As such, for at least the reasons discussed above, it is respectfully submitted that claims 5-9 are distinguishable over the applied art. Accordingly, withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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JAO:JLC/aaw

Attachments:

Petition for Extension of Time
Amendment Transmittal

Date: **January 13, 2005**

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